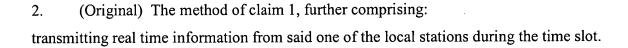1.   (Currently Amended) A method usable with a wireless medium and local stations, comprising:

communicating a request between one of the local stations and a central authority to reserve a time slot for transmitting from said one of the local stations;

using the central authority to selectively reserve the time slot based on at least in part a reservation schedule; and

if the central authority reserves the time slot, <u>in response to the beginning of the time slot,</u> <u>transmitting data to</u> ~~during the time slot, preventing~~ the other local stations <u>to prevent the other</u> <u>local stations</u> from transmitting.

2.   (Original) The method of claim 1, further comprising:
transmitting real time information from said one of the local stations during the time slot.

3.   (Original) The method of claim 2, wherein the real time information indicates an audio stream.

4.   (Original) The method of claim 2, wherein the real time information indicates a video stream.

5.   (Original) The method of claim 1, wherein the local stations and the central authority form at least part of a wireless local area network.

6.   (Original) The method of claim 1, wherein the communicating the request comprises:

transmitting a reservation frame between said one of the local stations and the central authority.

7.   (Original) The method of claim 6, wherein the reservation frame indicates one or more of the following:

a traffic priority, a start time, and a traffic type.

8.   (Original) The method of claim 6, wherein the reservation frame indicates a required throughput and a periodicity of transmissions if the central authority does not know a traffic type of the communication.

9.   (Original) The method of claim 1, wherein the central authority bases reservation of the time slot at least in part on underlying network properties.

10.   (Original) The method of claim 9, wherein the underlying network properties may include one or more of the following:
a throughput, latency and the bit error rate in the transmission of frames.

11.   (Original) The method of claim 1, wherein the central authority bases reservation of the time slot at least in part on characteristics of a traffic to be transmitted during the time slot.

12.   (Original) The method of claim 11, wherein the characteristic may include one or more of the following:
a required throughput and a maximum delay between successive frames that are communicated over the wireless medium.

13.   (Original) The method of claim 1, wherein the central authority bases reservation of the time slot at least in part on an amount of bandwidth already reserved for other stations.

14.   (Original) The method of claim 1, wherein the central authority bases reservation of the time slot at least in part on a policy associated with said one of the local stations.

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15.   (Original) The method of claim 1, further comprising:

communicating between the central authority and said one of the local stations to indicate acceptance or refusal of the request.

16.   (Original) The method of claim 1, further comprising:

before the beginning of the reserved time slot, transmitting a frame from the central authority to update a network allocation vector of each local station with a duration of the time slot to cause at the remaining local stations to ascertain that the wireless medium is busy during the time slot.

17.   (Currently Amended) The method of claim 1, wherein <u>the selective reservation by the central authority is further based at least in part on the reservation schedule maintained by the central authority, and</u> the local stations and the central authority are associated with a cell, the method further comprising:

communicating the request the central authority and another central authority that is associated with another cell~~,~~<u>.</u>

~~wherein the selective reservation by the first central authority is further based at least in part on the reservation schedule maintained by the first central authority.~~

18.   (Original) The method of claim 1, further comprising:

using the central authority to cancel the reserved time slot.

19.   (Original) The method of claim 18, wherein the central authority selectively cancels the reserved time slot based on whether said one of the local stations did not transmit during a previously scheduled time slot.

20.   (Original) The method of claim 18, wherein the central authority selectively cancels the reserved time slot based on whether said one of the local stations transmits a cancellation request.

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21.   (Original) The method of claim 1, wherein at least some of the local stations are located within a cell that includes multiple access points, the method further comprising:

using the central authority to route real time traffic through the one of the access points that has the least amount of existing traffic.

22.   (Original) The method of claim 1, wherein at least some of the local stations are located within a cell that has multiple carrier frequencies that overlap in the cell, the method further comprising:

using the central authority to transmit real time traffic using the carrier frequency that best meets a predefined criteria.

23.   (Original) The method of claim 22, wherein the predefined criteria comprises at least one of the following: bit error rate and the latency of the medium.

24.   (Currently Amended) A wireless communication system comprising:
local stations; and
a central authority to:

communicate with the local stations over a wireless medium,

receive a request from one of the local stations to reserve a time slot for transmissions from said one of the local stations,

selectively reserve the time slot based on at least in part a reservation schedule, and

if the time slot is reserved, ~~prevent the remaining one or more local stations other than said one of the local stations from transmitting during the time slot~~ in response to the beginning of the time slot, transmit data to the other local stations to prevent the other local stations from transmitting.

25.   (Original) The system of claim 24, wherein said one of the local stations transmits real time information during the time slot.

26.   (Original) The system of claim 24, wherein said one of the local stations is adapted to transmit a reservation frame to the central authority to communicate the request.

27.   (Original) The system of claim 26, wherein the reservation frame indicates one or more of the following:

a traffic priority, a start time, and a traffic type.

28.   (Original) The system of claim 26, wherein the reservation frame indicates a required throughput and a periodicity of transmissions if the central authority does not know a traffic type of the communication during the time slot.

29.   (Original) The system of claim 24, wherein the central authority, before the beginning of the reserved time slot, transmits a frame to update a network allocation vector of each local station with a duration of the time slot to cause at the remaining local stations to ascertain that the wireless medium is busy during the time slot.

30.   (Currently Amended) The system of claim 24, wherein <u>the selective reservation by the central authority is further based at least in part on the reservation schedule maintained by the central authority,</u> the local stations and the central authority are associated with a cell, and the central authority is adapted to communicate the request between the central authority and a second central authority that is associated with another cell, ~~wherein the selective reservation by the first central authority is further based at least in part on the reservation schedule maintained by the first central authority~~.

31.   (Currently Amended) An article comprising a machine-readable storage medium storing instructions to cause a control unit to:

communicate with local stations over a wireless medium,

receive a request from one of the local stations to reserve a time slot for transmissions from said one of the local stations,

selectively reserve the time slot based on at least in part a reservation schedule, and

if the time slot is reserved, ~~prevent the remaining one or more local stations other than said one of the local stations from transmitting during the time slot~~ in response to the beginning of the time slot, transmit data to the other local stations to prevent the other local stations from transmitting.

32.   (Original) The article of claim 31, wherein said one of the local stations communicates real time information during the time slot.

33.   (Original) The article of claim 31, wherein the storage medium stores instructions to cause the control unit, before the beginning of the reserved time slot, transmit a frame to update a network allocation vector of each local station with a duration of the time slot to cause at the remaining local stations to ascertain that the wireless medium is busy during the time slot.

34.   (Original) The article of claim 31, wherein the local stations and the control unit are associated with a cell and the control unit is adapted to communicate the request between the control unit and a central authority that is associated with another cell, the storage medium storing instructions to cause the control unit to base the selective reservation on the reservation schedule maintained by the control unit.

35.   (New) The method of claim 1, wherein the transmitting data comprises:
populating network allocation vectors of the other local stations.

36.   (New) The system of claim 24, wherein the central authority prevents the other local stations from transmitting by populating network allocation vectors of the other local stations.

37.   (New) The article of claim 31, wherein the storage medium stores instructions to cause the processor to prevent the other local stations from transmitting during the time slot by populating network allocation vectors of the other local stations.